

# Individual optimisation of contrast media application and radiation dose in computed tomographic angiography

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### **Individual Optimisation of Contrast Media Application and Radiation Dose in Computed Tomographic Angiography; From Phantom to Patient**

Madeleine Kok, 18 november 2016

1. Standardised heating of iodinated contrast to body temperature should be a prerequisite for clinical administration of intravenous contrast material delivery (*this thesis*)
2. Performing CT angiography with lower tube voltages is beneficial in terms of reducing the amount of iodinated contrast and radiation dose (*this thesis*)
3. Radiation dose and iodinated contrast can be used more efficiently while individualising scan and injection protocols with regards to the body size of the patient and the clinical indication of the scan (*this thesis*)
4. The use of “one size fits all” (protocols) is outdated (*this thesis*)
5. Future research should focus on the interpretation of clinically used image quality parameters, such as signal-to-noise and contrast-to-noise ratios, using modern CT scanners with latest technologies
6. A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty (*Winston Churchill*)
7. It is the supreme art of the teacher to awaken joy in creative expression and knowledge (*Albert Einstein*)
8. Het gaat er niet om wat je allemaal weet, wat belangrijk is, is wat je ermee doet (*Dr. M Das*)
9. Vallen is niet erg, het punt is, dat je niet moet blijven liggen (*Prof. dr. J.E. Wildberger*)